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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
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EXAMINER

BLACKWELL, JAMES H

ART UNIT	PAPER NUMBER
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2176

DATE MAILED: 03/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/055,253

Applicant(s)

NIELSEN, ANDREW S.

Examiner

James H Blackwell

Art Unit

2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 10-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

This Office Action is in response to Election/Restriction requirement received 02/23/05 in which applicant elected Group I (claims 1-9).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 6 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, the use of the term "non-tagged" is not mentioned in the specification.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The subject matter specified in claim 1 and its dependents is non-statutory and fails to recite patent-eligible subject matter in that it is not in the useful or technological arts.

Additionally, the claimed invention is so abstract and sweeping that it covers the method as practiced by a human operator assisted only by pencil and paper. The claims do not include a particular machine or apparatus, and no machine-implemented steps are recited. Every step is capable of performance by the human mind. A method

Art Unit: 2176

of this sort, traditionally called a "mental process," is not patentable subject matter.

"Phenomena of nature, though just discovered, "*mental processes*," abstract intellectual concepts are not patentable as they are the basic tools of scientific and technological work." (emphasis added) *Gottschalk v. Benson*, 75 U.S.P.Q. 673, 675 (U.S.S.C. 1972). See also, *In re Prater and Wei*, 159 U.S.P.Q. 583 (1968), *rehearing* U.S.P.Q. 571 (1969).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyama et al. (hereinafter Aoyama, U.S. Patent No. 5,956,726).

In regard to independent Claim 1, Aoyama teaches *comparing a first document and a second document by inserting at least one compare attribute into one of the first document and the second document* in that Aoyama's invention produces as examples documents as shown in Figs. 3a and 3b. Fig. 3a represents the original document, while Fig. 3b represents an edited version of Fig. 3a. Fig 3b has had *inserted* an additional document structure. Aoyama teaches that each of the tags in these two documents have assigned to them one of the following four types of comparison criterion: (1) Tags having the contents which are compared only when the particular tags are coincident with each other (identity tags); (2) Tags having the contents the difference of which is ignored at the time of comparison (ignoring tags); (3) A set of tags identical to each other in logical meaning (equivalence tags, such as "FIRST ITEM" and "ITEM"); and (4) A set of tags having the contents which are not compared with each other (no-comparison tags) (Col. 3, lines 48-61). Here, the claimed *compare attribute* is *inserted*

into the second document in the form of additional content. The term attribute is not specifically used by Aoyama, however it would have been obvious to one of ordinary skill in the art at the time of invention to assume that the tags assigned with comparison criteria could have used attributes to define the criteria, providing the benefit of assisting in the comparison of two structured documents. Aoyama continues by teaching *comparing the first document and the second document in a manner based on the compare attribute* in that Aoyama's invention teaches a structured document difference extraction method including memory means for storing structured documents defined as information on the logical structure of documents before and after editing such as deletion, insertion or change, and a processor for extracting a character string non-coincident between the structured documents before and after editing as a difference, comprising the steps of: editing and storing a structured document in the memory means; parsing the logical structures of the structured document before and after editing read from the memory unit on the basis of a set comparison criterion; and extracting the difference between the structured documents in such a manner as to satisfy the comparison criterion in accordance with the result of parsing of the structured documents. The comparison criterion includes tags indicating logical structures and types of comparison criterion corresponding to the tags with the contents thereof being stored in a table (Col. 14, lines 50-67; Col. 15, lines 1-3).

In regard to dependent Claim 2, Aoyama teaches *the step of inserting one of an ignore element attribute, an ignore attributes attribute, and an unordered attribute* in that constructing comparison criteria that include tags indicating logical structures and types

of comparison criterion corresponding to the tags with the contents thereof being stored in a table. There are four types of comparison criteria, one being criteria (2) Tags having the contents the difference of which is ignored at the time of comparison (*ignoring tags*) (Col. 3, lines 48-57).

In regard to dependent Claim 3, Aoyama teaches *the step of inserting an ignore element attribute* in that constructing comparison criteria that include tags indicating logical structures and types of comparison criterion corresponding to the tags with the contents thereof being stored in a table. There are four types of comparison criteria, one being (2) Tags having the contents the difference of which is ignored at the time of comparison (*ignoring tags*) (Col. 3, lines 48-57). Aoyama also teaches that *when comparing the first document and the second document, ignoring the elements specified by the ignore element attribute* in that Aoyama's invention teaches in processing example 2, a step where a "<CHAPTER NUMBER>" tag is encountered. This tag is defined as an ignoring tag. In this case, the difference in chapter number is ignored during the comparison. This is because it has no effect on difference extraction (Col. 9, lines 29-44).

In regard to dependent Claim 4, Aoyama teaches *inserting an ignore attribute attribute* in that constructing a comparison criteria that includes tags indicating logical structures and types of comparison criterion corresponding to the tags with the contents thereof being stored in a table. There are four types of comparison criteria, one being (2) Tags having the contents the difference of which is ignored at the time of comparison (*ignoring tags*) (Col. 3, lines 48-57). Aoyama also teaches that *when*

comparing the first document and the second document, ignoring the attributes specified by the ignore attribute attribute in that Aoyama's invention teaches in processing example 2, a step where a "<CHAPTER NUMBER>" tag is encountered. This tag is defined as an ignoring tag. In this case, the difference in chapter number is ignored during the comparison. This is because it has no effect on difference extraction (Col. 9, lines 29-44).

In regard to dependent Claim 7, Aoyama fails to explicitly teach the *searching for an unordered attribute* or the specific processing algorithms implied by the claim that *when an unordered attribute is not detected or an unordered attribute has a first predetermined value, performing a comparison between the first document and the second document; wherein the order of the elements is considered in the comparison; when an unordered attribute has a second predetermined value, performing a comparison between the first document and the second document; wherein the order of the elements is not considered in the comparison.* However, it would have been obvious to one of ordinary skill in the art at the time of invention to assume that specific attributes, their names and values dictates the processing steps in comparing the two documents, providing the benefit of a selective comparison based on conditions.

In regard to dependent Claim 8, Aoyama teaches that *the first document and the second document include documents in a markup language* in that Aoyama's invention compares differences in two structured documents, in this case SGML (*the markup language is one of XML, HTML, SGML, WML, and XHTML*) (Col. 1, lines 51-61).

Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoyama in view of Birsan et al. (hereinafter, Birsan, U.S. Patent No. 6,848,078).

In regard to dependent Claim 5, Aoyama fails to teach *the step of inserting an unordered attribute*. However, Birsan teaches the use of an ID attribute of the elements of the base file and the modified file being compared. The step of comparing may also use a name attribute of the elements of the base file and the modified file being compared. Further, the step of comparing may use, when the hierarchically structured files are XML (extensible markup language) files, if provided by the elements of the base and modified files being compared, an attribute of type ID, or if an attribute of type ID is not provided by the elements of the base and modified files being compared, a <Uuid> tag if provided by the elements of the base and modified files being compared, or if an attribute of type ID and a <Uuid> tag is not provided by the elements of the base and modified files being compared, a name attribute if provided by the elements of the base and modified files being compared, or if an attribute of type ID, a <Uuid> tag and a name attribute is not provided by the elements of the base and modified files being compared, a concatenation of a tag of the element and a value of the element (Col. 2, lines 18-36). Essentially, Birsan uses a variety of attributes that are compared between documents based on some comparison logic. The insertion of such attributes, and their analysis by the logic will determine if the order of the attributes is important. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Aoyama and Birsan as both inventions relate to comparing two structure documents based on comparing their structure trees. Adding the teaching of

Birsan allows for certain attributes to be ignored as far as ordering is concerned.

Aoyama also fails to teach that *when comparing the first document and the second document, ignoring the order of the elements specified by the unordered attribute.*

However, Birsan teaches that to allow for different ordering of nodes within a level, the dependency of the order among siblings may be ignored in identity, in which case an assumption is made that the node_s different among sibling nodes (Col. 8, lines 1-4).

Thus, based on an identity attribute, the ordering of elements may be ignored when performing the comparison of XML trees representing two XML documents that are being compared. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Aoyama and Birsan as both inventions relate to comparing two structured documents using trees. Adding the teaching of Birsan provides the benefit of ignoring the order of elements.

In regard to dependent Claim 6, Aoyama teaches *parsing the first document to generate a first internal representation thereof; parsing the second document to generate an second internal representation thereof* in that Aoyama's invention parses the logical structures of the structured document before and after editing read from the memory unit on the basis of a set comparison criterion (Col. 3, lines 41-43). In addition, Aoyama also teaches that a document tree representing the structure of each structured document is produced by the parsing step (Col. 4, lines 36-44). Aoyama also teaches *comparing non-tagged elements of the first internal representation and the second internal representation* in that Aoyama's invention teaches comparing contents of tags including tags having contents which are compared only when the particular tags are

Art Unit: 2176

coincident with each other, tags having contents which are ignored at the time of comparison, a set of tags having the same logical meaning, and a set of tags having contents which are not compared with each other (Abstract). Aoyama does not explicitly teach *comparing non-tagged attributes for each element*. However, Birsan teaches that the step of comparing may use an ID attribute of the elements of the base file and the modified file being compared. The step of comparing may also use a name attribute of the elements of the base file and the modified file being compared. Further, the step of comparing may use, when the hierarchically structured files are XML (extensible markup language) files, if provided by the elements of the base and modified files being compared, an attribute of type ID, or if an attribute of type ID is not provided by the elements of the base and modified files being compared, a <Uuid> tag if provided by the elements of the base and modified files being compared, or if an attribute of type ID and a <Uuid> tag is not provided by the elements of the base and modified files being compared, a name attribute if provided by the elements of the base and modified files being compared, or if an attribute of type ID, a <Uuid> tag and a name attribute is not provided by the elements of the base and modified files being compared, a concatenation of a tag of the element and a value of the element (Col. 2, lines 18-36). Hence, Birsan teaches comparing attributes. Aoyama also fails to teach *comparing child nodes in a non-ordered manner when a non-ordered tag is set to true in the parent node*. However, Birsan teaches that to allow for different ordering of nodes within a level, the dependency of the order among siblings may be ignored in identity, in which case an assumption is made that the node_s different among sibling nodes (Col. xx,

Art Unit: 2176

lines xx-xx). It would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Aoyama and Birsan as both inventions relate to comparing two structured documents by elements, nodes, and attributes. Adding the teaching of Birsan provides the benefit of selective comparison of structured document components.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James H Blackwell whose telephone number is 571-272-4089. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James H. Blackwell
03/18/05


JOSEPH FEILD
SUPERVISORY PATENT EXAMINER